



Implementing and Configuring the Sex Offender Registry Tool (SORT) Application

July 2010

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Before beginning the Web site creation process, copy the Web site files, located in the SORTAdmin and SORTPublic folders included in the SORT Application zip file, to your server where you want them to reside.

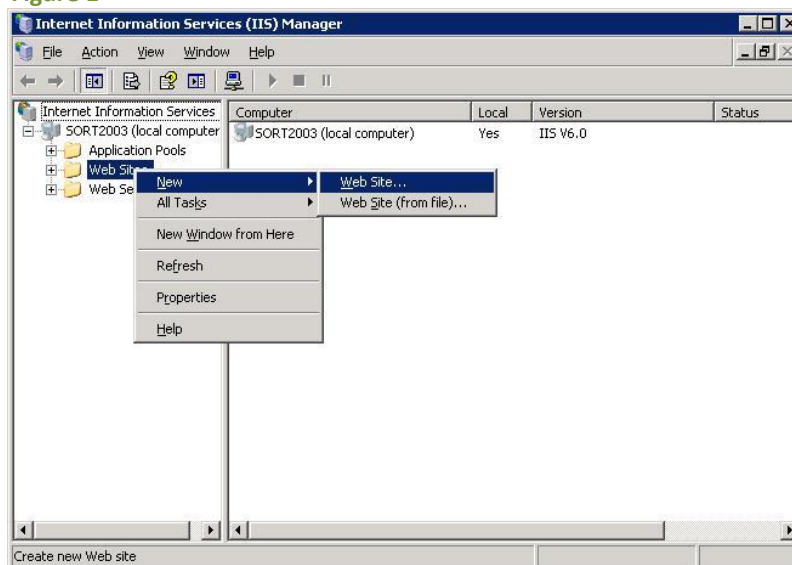
Implementing SORT in IIS 6.0

This section will guide you through the process required to install the Sex Offender Registry Tool (SORT) in Internet Information Services (IIS) 6.0. Before beginning the configuration process, ensure that the .NET Framework 3.5 with Service Pack 1 is installed on the Web server.

Create the Web Sites

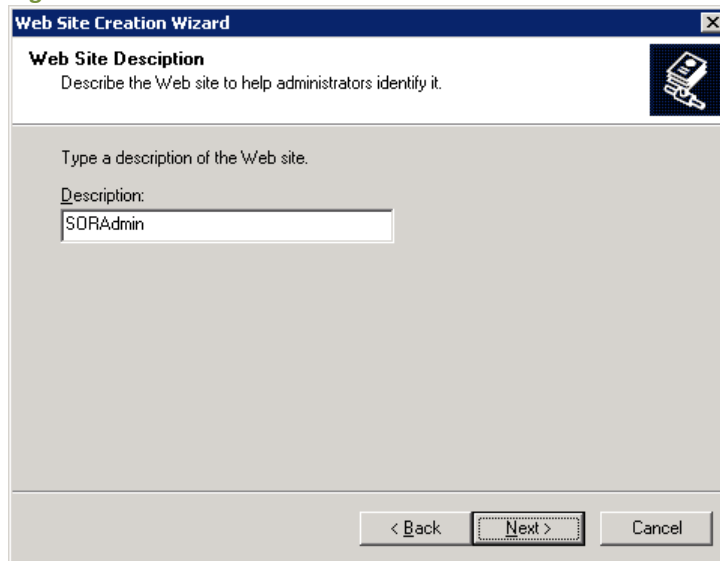
To begin the Web site creation process, open IIS Manager and right-click on the “Web Sites” folder and select “New” -> “Web Site.”

Figure 1



Click “Next” on the “Welcome to the Web Site Creation Wizard” window that appears. On the “Web Site Creation Wizard” form, enter the title of the Web site as the description and click “Next.”

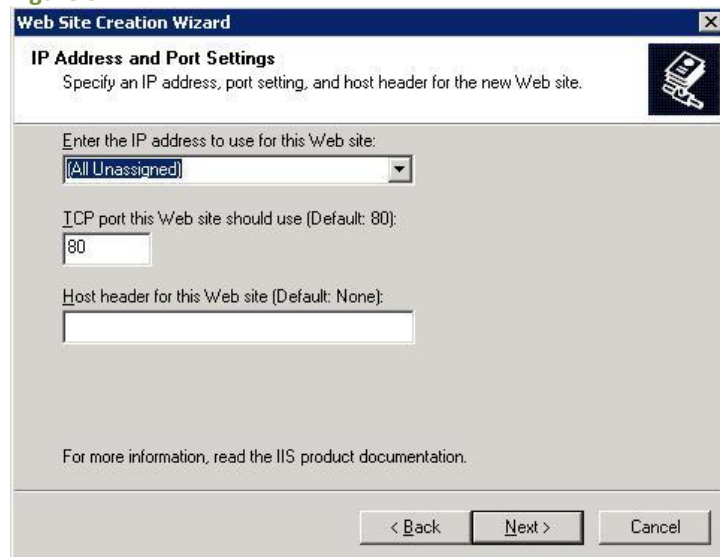
Figure 2



The screenshot shows the 'Web Site Creation Wizard' window with the 'Web Site Description' tab selected. The window title is 'Web Site Creation Wizard'. Below the title bar, the text 'Web Site Description' is followed by the instruction 'Describe the Web site to help administrators identify it.' There is a small icon of a floppy disk with a checkmark. The main area contains the text 'Type a description of the Web site.' followed by a label 'Description:' and a text box containing 'SORAdmin'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

Next, select the IP address, TCP port, and Host Header name of the site, if necessary, and click “Next.”

Figure 3



The screenshot shows the 'Web Site Creation Wizard' window with the 'IP Address and Port Settings' tab selected. The window title is 'Web Site Creation Wizard'. Below the title bar, the text 'IP Address and Port Settings' is followed by the instruction 'Specify an IP address, port setting, and host header for the new Web site.' There is a small icon of a floppy disk with a checkmark. The main area contains three sections: 'Enter the IP address to use for this Web site:' with a dropdown menu showing '(All Unassigned)'; 'TCP port this Web site should use (Default: 80):' with a text box containing '80'; and 'Host header for this Web site (Default: None):' with an empty text box. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. A link 'For more information, read the IIS product documentation.' is also present.

Next, enter the path of or browse to the administrative site home folder and click “Next.”

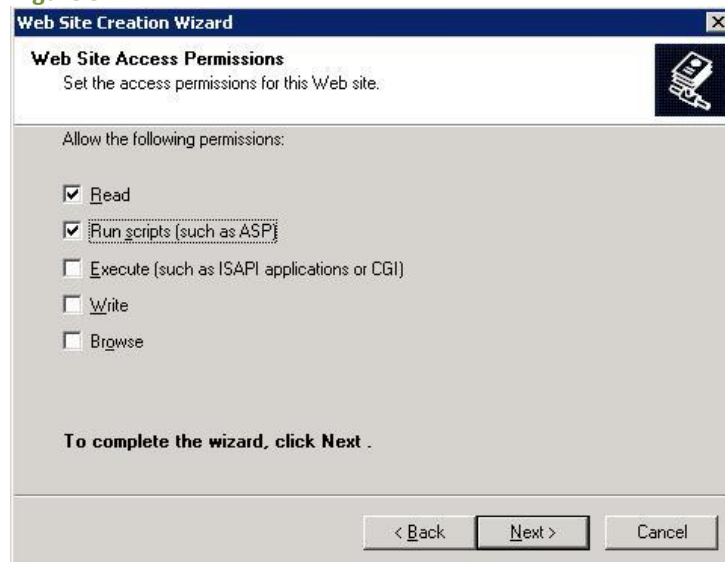
Figure 4



The screenshot shows the 'Web Site Creation Wizard' window, specifically the 'Web Site Home Directory' step. The title bar reads 'Web Site Creation Wizard'. Below the title bar, the section is titled 'Web Site Home Directory' with a subtext: 'The home directory is the root of your Web content subdirectories.' To the right of this text is a small icon of a floppy disk with a plus sign. The main area contains the instruction 'Enter the path to your home directory.' Below this is a 'Path:' label followed by a text input field containing 'C:\inetpub\SORT\SORTAdmin'. To the right of the input field is a 'Browse...' button. Below the input field is a checked checkbox labeled 'Allow anonymous access to this Web site'. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'.

Next, select the “Read” and “Run scripts” check boxes to permit the Web site the appropriate access permissions to the home folder and click “Next.” Click “Finish” on the final form to complete the Web Site Creation Wizard.

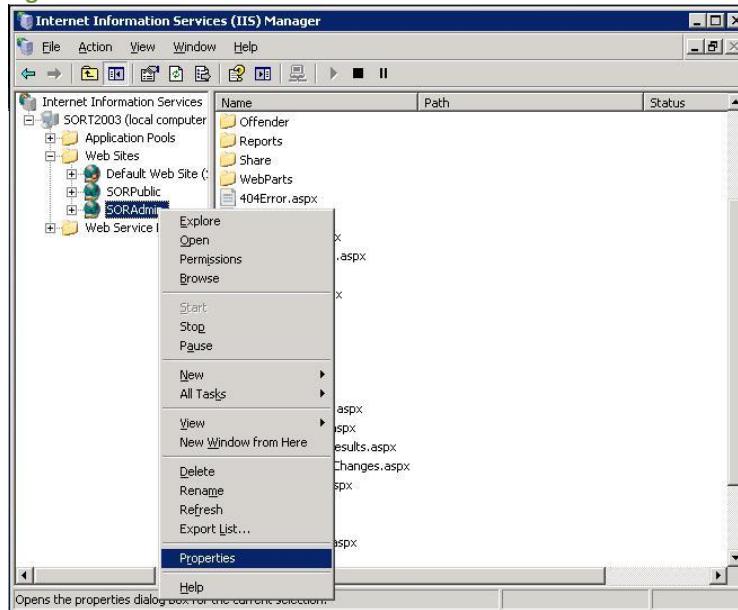
Figure 5



The screenshot shows the 'Web Site Creation Wizard' window, specifically the 'Web Site Access Permissions' step. The title bar reads 'Web Site Creation Wizard'. Below the title bar, the section is titled 'Web Site Access Permissions' with a subtext: 'Set the access permissions for this Web site.' To the right of this text is a small icon of a floppy disk with a plus sign. The main area contains the instruction 'Allow the following permissions:' followed by a list of checkboxes: 'Read' (checked), 'Run scripts (such as ASP)' (checked), 'Execute (such as ISAPI applications or CGI)' (unchecked), 'Write' (unchecked), and 'Browse' (unchecked). Below this list is the instruction 'To complete the wizard, click Next .'. At the bottom of the window are three buttons: '< Back', 'Next >', and 'Cancel'.

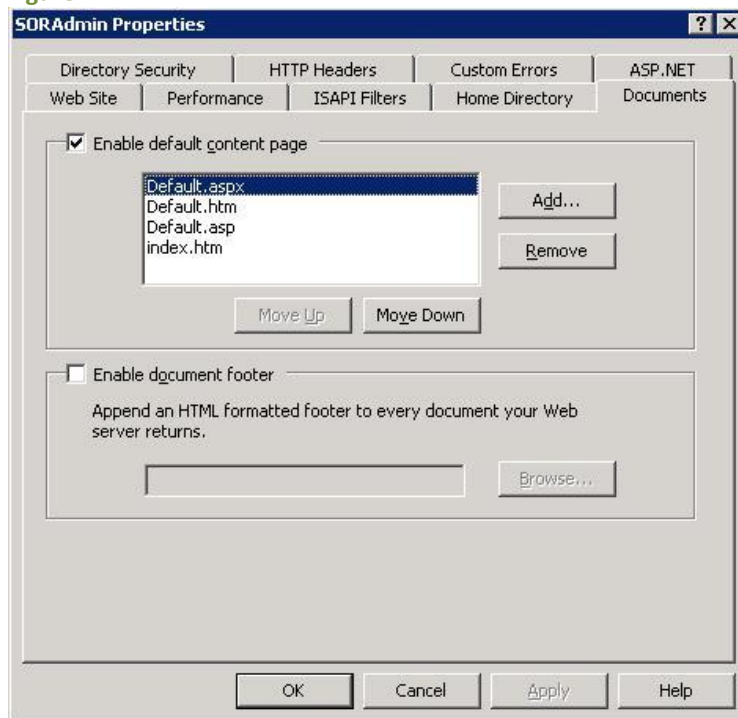
After the administrative Web site has been created, right-click on the Web site and select “Properties” from the menu.

Figure 6



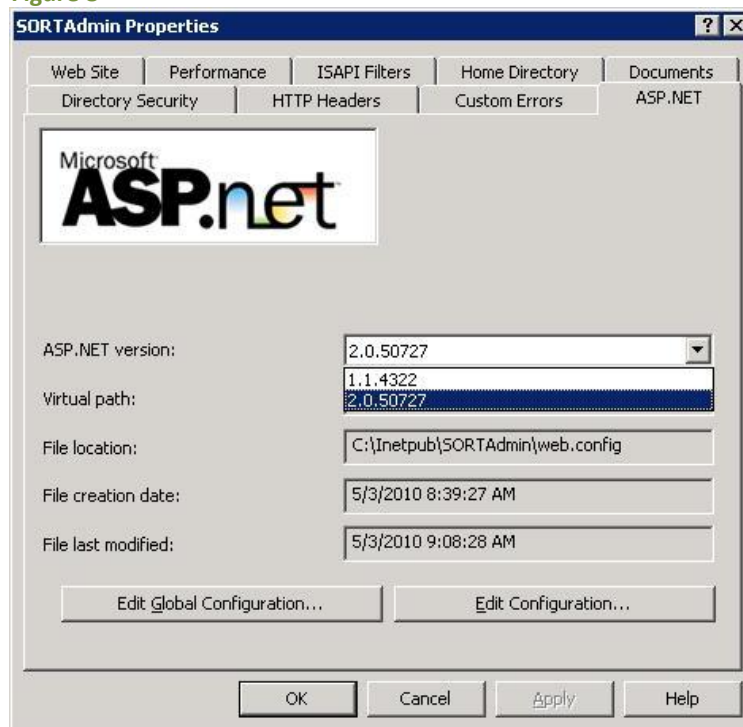
Next, select the “Documents” tab and add Default.aspx as a new default content page for this Web site.

Figure 7



Next, click on the ASP.NET tab and verify that the ASP.NET version is set to 2.0.50727.

Figure 8

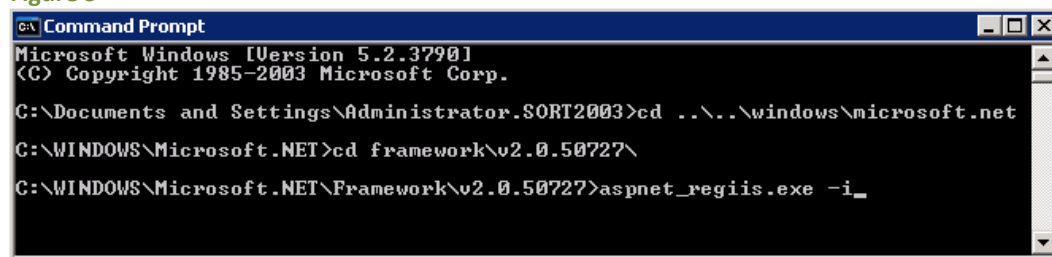


Repeat the steps in this section to set up the public Web site as well. During the public Web site setup you should point the home directory to the SORTPublic folder that you extracted from the SORT zip file.

After the SORT administrative and public Web sites are configured, open a command prompt and run the following command:

```
C:\Windows\Microsoft.NET\Framework\v2.0.50727>aspnet_regiis.exe -i
```

Figure 9

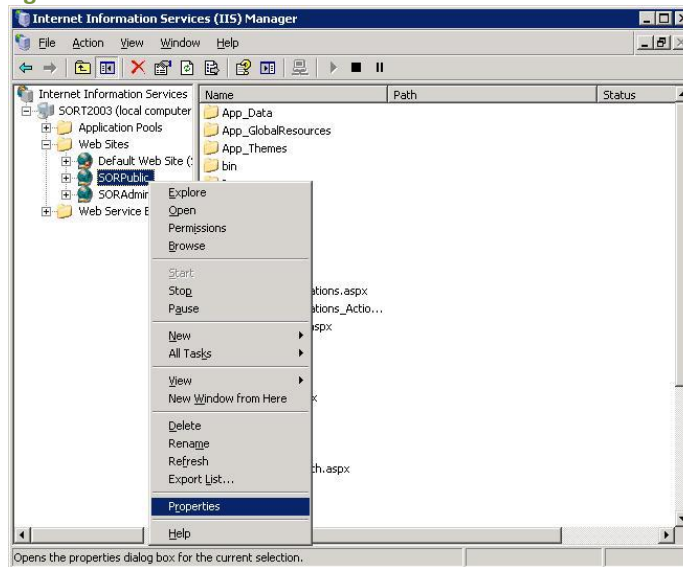


Create Host Headers for the Local Jurisdiction Public Web Sites

This section will demonstrate how to create Host Headers to provide access to the local jurisdiction's public Web sites. Host Headers do not need to be created until your jurisdiction is ready to setup the public Web sites. You may wish to wait until after the local jurisdictions have been added to SORT so you know what Host Headers to create.

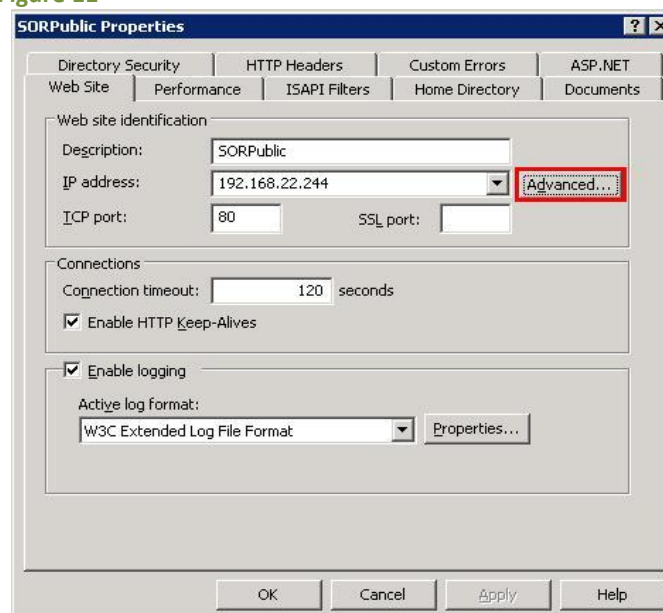
To begin creating Host Headers, right-click on the SORT public Web site in the list of Web sites and select "Properties" from the menu.

Figure 10



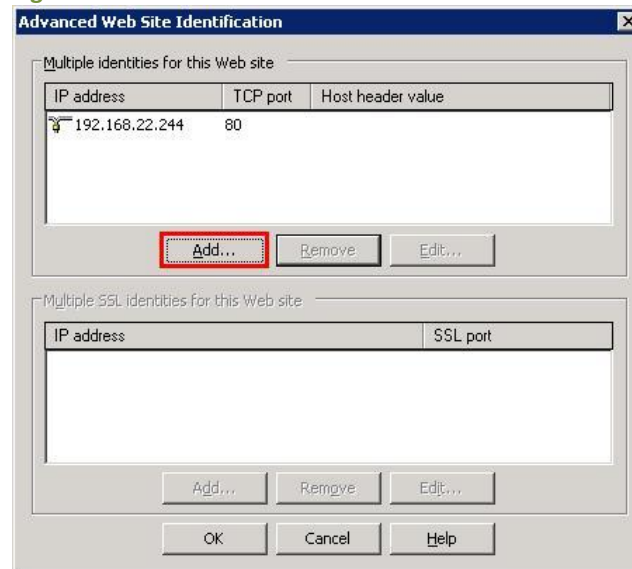
On the "SORPublic Properties" form, click the "Advanced" button.

Figure 11



Next, on the “Advanced Web Site Identification” form, click the “Add” button to create a new Host Header. To edit an existing Host Header, select it from the list and click the “Edit” button.

Figure 12



The "Advanced Web Site Identification" dialog box is shown. It has a title bar with a close button. The main area is divided into two sections. The top section, "Multiple identities for this Web site", contains a table with three columns: "IP address", "TCP port", and "Host header value". The first row shows "192.168.22.244" and "80". Below the table are "Add...", "Remove", and "Edit..." buttons. The "Add..." button is highlighted with a red rectangle. The bottom section, "Multiple SSL identities for this Web site", contains a table with two columns: "IP address" and "SSL port". Below this table are "Add...", "Remove", and "Edit..." buttons. At the bottom of the dialog are "OK", "Cancel", and "Help" buttons.

Next, on the “Add/Edit Web Site Identification” form, select an IP address if necessary, enter a TCP port, and enter a Host Header value. When finished, click the “OK” button.

Figure 13



The "Add/Edit Web Site Identification" dialog box is shown. It has a title bar with a close button. The main area is labeled "Identification" and contains three fields: "IP address:" with a dropdown menu showing "(All Unassigned)", "TCP port:" with a text box, and "Host Header value:" with a text box. Below these fields are "OK", "Cancel", and "Help" buttons.

Repeat the steps in this section to create Host Headers for all of the jurisdiction’s public Web sites.

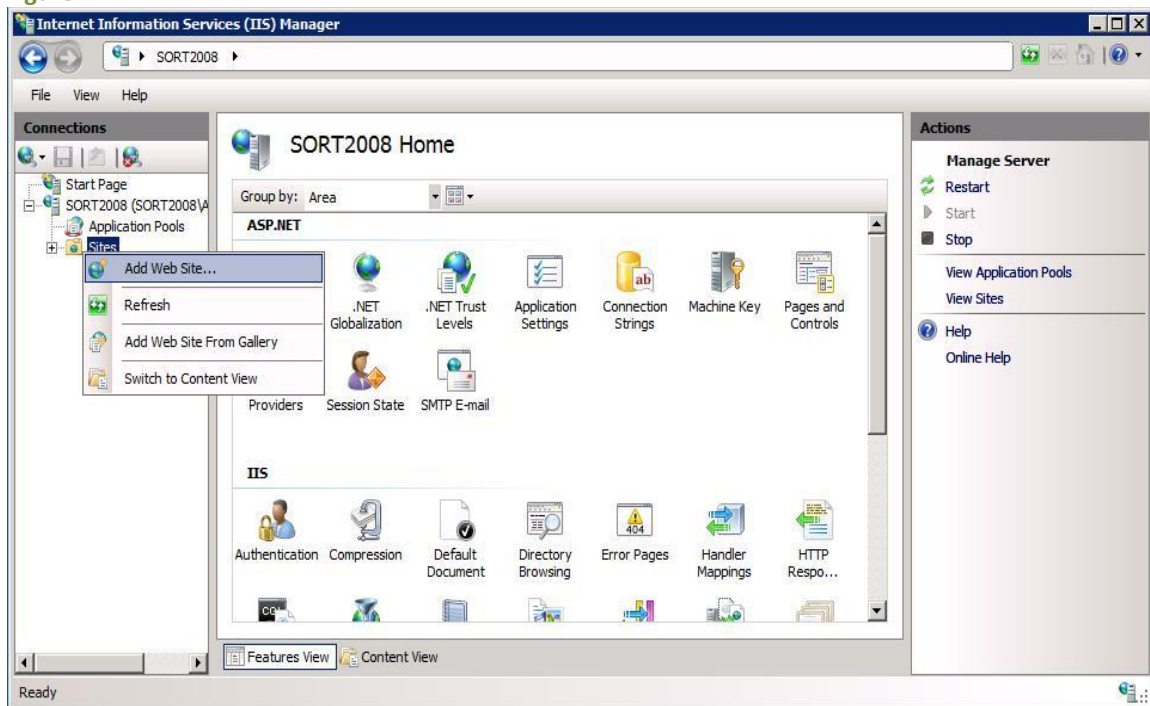
Implementing SORT in IIS 7.0

This section will guide you through the process required to install SORT in IIS 7.0. Before beginning the configuration process, ensure that the .NET Framework 3.5 with Service Pack 1 is installed on the Web server.

Create the Web Sites

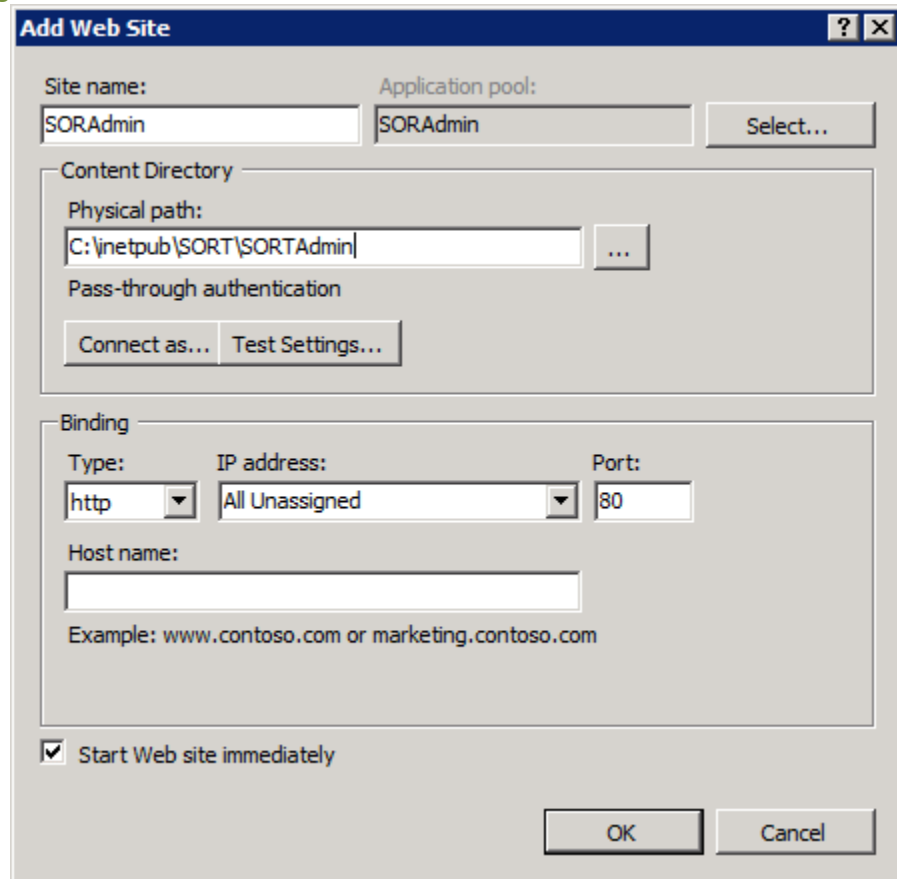
To begin the Web site creation process, open IIS Manager and right-click on the “Sites” folder and select “Add Web Site.”

Figure 14



When the “Add Web Site” window appears, enter a site name and enter the path of or browse to the administrative site home folder. You can also assign an IP address, port, and host name, if necessary. Click the “OK” button to finish creating the site.

Figure 15



The screenshot shows the "Add Web Site" dialog box with the following configuration:

- Site name:** SORAdmin
- Application pool:** SORAdmin
- Content Directory:**
 - Physical path:** C:\inetpub\SORT\SORTAdmin
 - Pass-through authentication:** (unchecked)
 - Buttons:** Connect as..., Test Settings...
- Binding:**
 - Type:** http
 - IP address:** All Unassigned
 - Port:** 80
 - Host name:** (empty)
 - Example:** www.contoso.com or marketing.contoso.com
- Start Web site immediately:** (checked)
- Buttons:** OK, Cancel

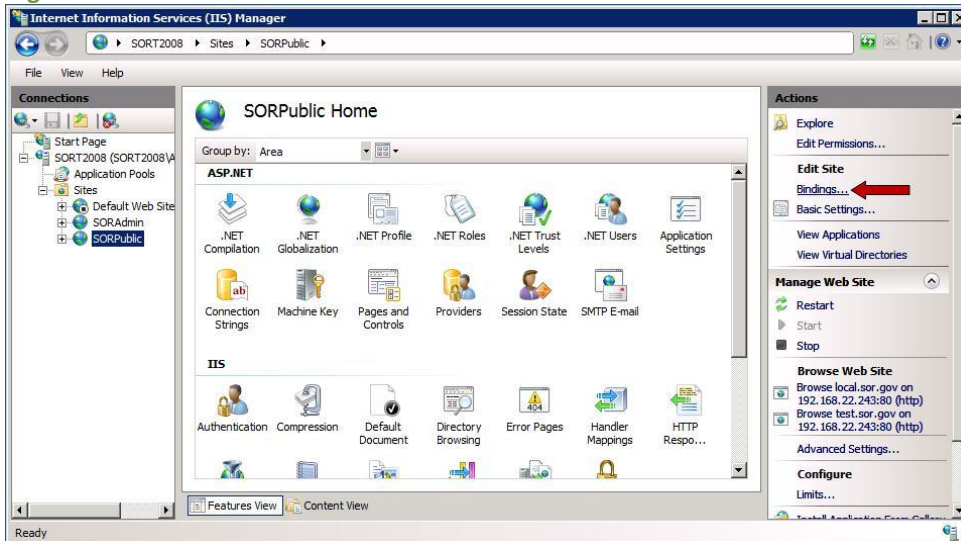
Repeat the steps in this section to create the public Web site as well. During the public Web site setup you should point the home directory to the SORTPublic folder that you extracted from the SORT zip file.

Create Host Headers for the Local Jurisdiction Public Web Sites

This section will demonstrate how to create Host Headers to provide access to the local jurisdiction's public Web sites. Host Headers do not need to be created until your jurisdiction is ready to setup the public Web sites. You may wish to wait until after the local jurisdictions have been added to SORT so you know what Host Headers to create.

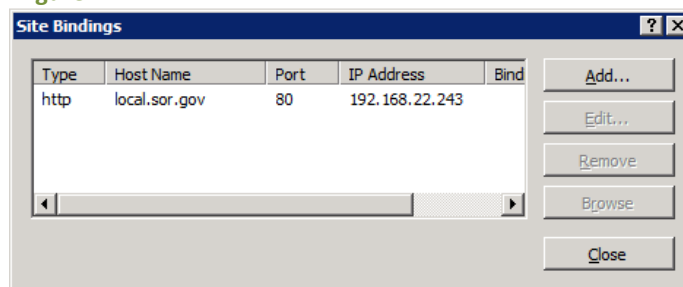
To begin creating Host Headers, click on the SORT public Web site in the list of IIS sites and then click "Bindings" on the right-side menu.

Figure 16



When the "Site Bindings" form opens, it will show a list of the existing Host Headers for the Web site. Click the "Add" button to add a new Host Header, or to edit an existing Host Header, select it and click the "Edit" button.

Figure 17



On the “Add Site Binding” form, enter the Host name and modify the Site Type, IP Address, and Port, if necessary, and click the “OK” button.

Figure 18



Repeat the preceding steps to create Host Headers for all of the jurisdiction’s public Web sites.

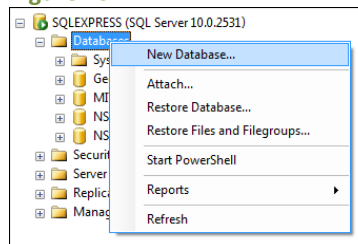
Setting up the SQL Database

You will need to follow these steps to set up the databases on a SQL server for the SORT application to use. The system must use SQL 2008 because of the usage of the “geography” data type for latitude and longitude. You can use either SQL 2008 Express (free to download at <http://www.microsoft.com/sql>) or any paid-for versions of SQL 2008.

NSOPW_SORT Database

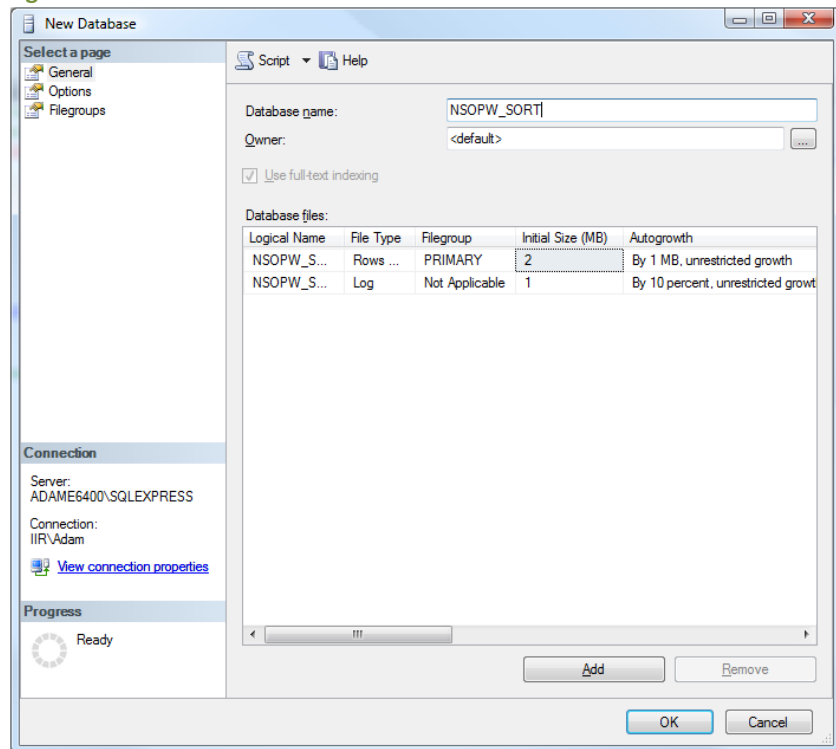
First, create the NSOPW_SORT database. To do this, open SQL Server 2008 Management Studio, right-click on “Databases,” and select “New Database” from the menu.

Figure 19



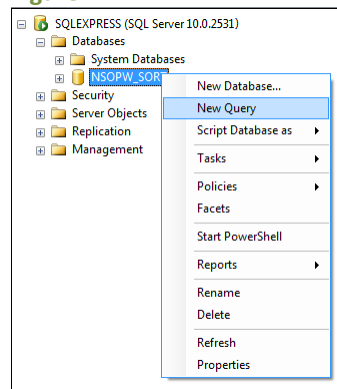
In the “New Database” window, type “NSOPW_SORT” as the database name and click “OK” to create the database.

Figure 20



Next, right-click on your newly created NSOPW_SORT database and select “New Query” from the menu.

Figure 21

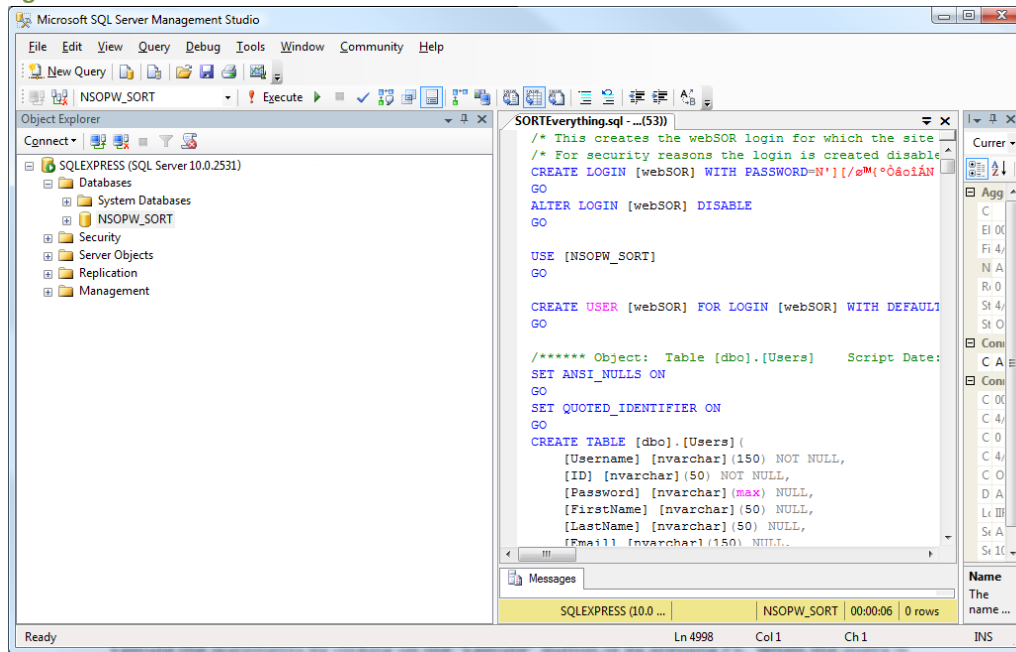


Next, drag the SORT_DB.sql file, which is included in the SORT Application zip file, into the new query window. To change the default values for creating the initial state-level jurisdiction, locate the following statement at line 5501 of the database script.

```
Insert into Jurisdiction (ID,Name,[State],MasterPage)
Values('State','State SOR','FL','SheriffPolice2')
```

Replace the “Values” for the corresponding parameter as needed. Once the application is used, the ID cannot be changed.

Figure 22



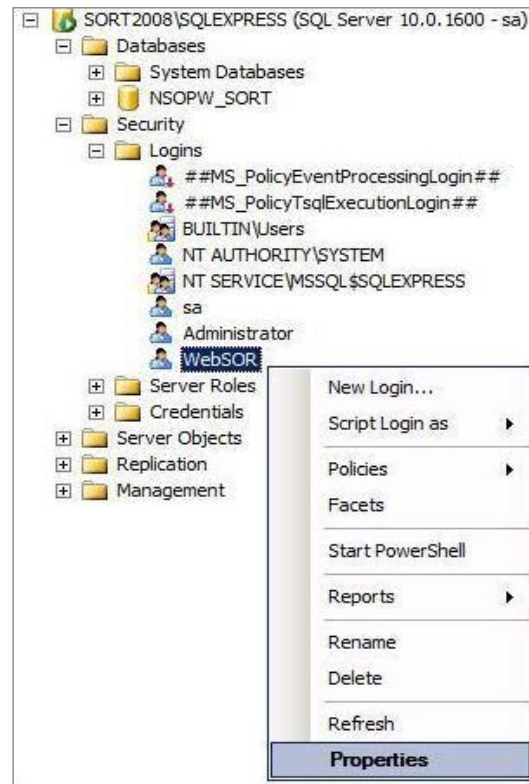
Execute the statements by clicking on the “Execute” button or by pressing F5. When the query is finished running, you should receive a message in the “Results” pane indicating the query was successfully executed.

Finalizing the SQL Users

The users, by default, are disabled and given a random password. Before you can start to use these databases, you will need to update this information. In SQL 2008 Manager, expand “Security” and then expand “Logins.”

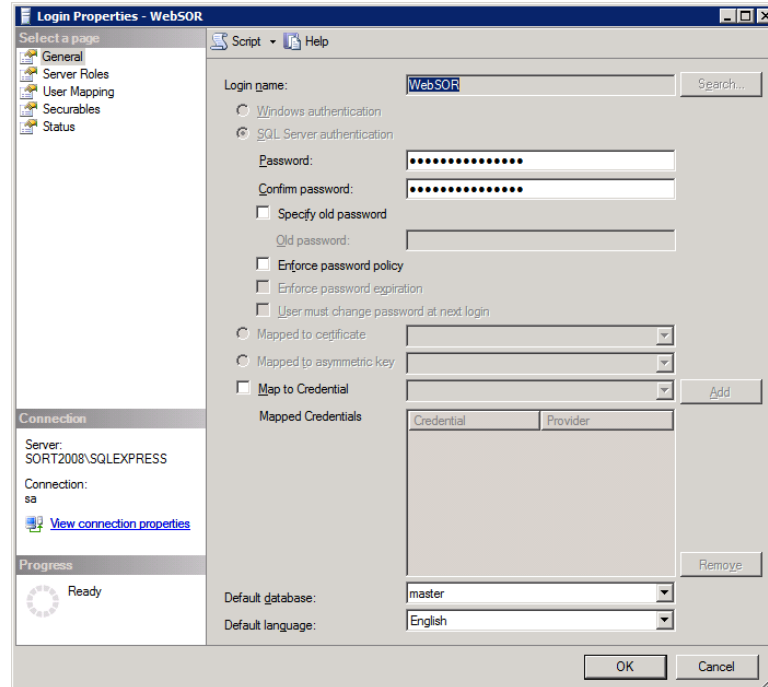
Next, right-click on the “WebSOR” login and select “Properties” from the menu.

Figure 23



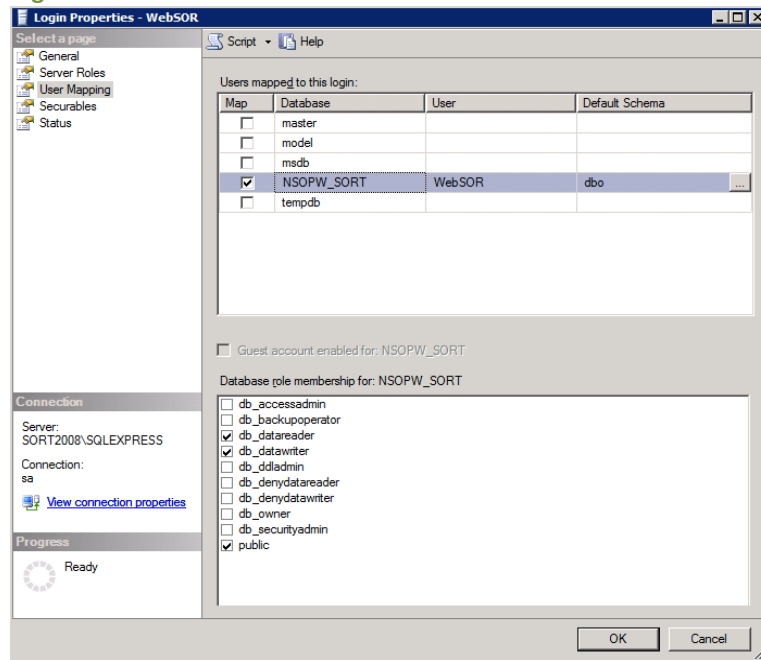
On the first properties screen, enter a new password for the WebSOR login. You will need to remember the login name and password since they will be used in the following steps when configuring the connection string in the Web.config file.

Figure 24



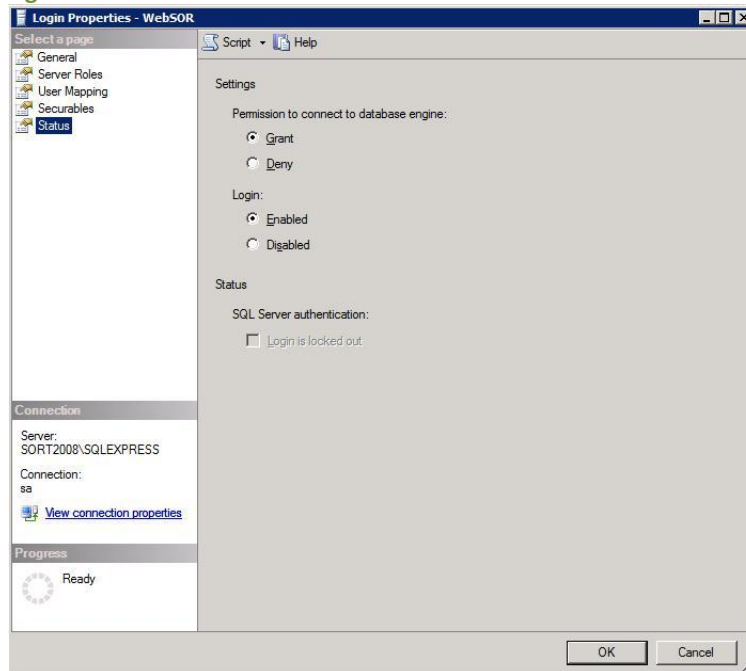
Next, click “User Mapping” from the menu on the left side of the form, and verify that the WebSOR user has the “db_datareader,” “db_datawriter,” and “public” role for NSOPW_SORT.

Figure 25



Next, click on “Status” from the menu on the left side of the form, change the login value to “Enabled,” and then click the “OK” button.

Figure 26



Configuring the Sites (Web.Config)

For the administrative and public Web site, you will need to customize the Web.config file found in the root of each site's folder. This section defines the different parameters within each configuration file to customize.

Application Settings Section

- **INSTALL** – This key should be commented out once the application is installed and accessed the first time. The application will tell you when to remove this key.
- **GOOGLEAPIKEY** – This key is used by SORT to access the Google Mapping and Geocoding service. In order for SORT to use this service, you must follow the instructions in the [Google Mapping and Geocoding Service](#) section of this document.
- **KEY** – This is the key used to encrypt/decrypt data from passwords to documents uploaded for offenders. This needs to be a random value and should not be changed once in production. **This random encryption value must be set before the application is accessed.** If this value is changed, then all encrypted items will be unusable.
- **WEBSITE.IDENTIFIER** – This is used in the subject line when sending error e-mails.
- **MAIL.ERRORS** – This is a semicolon-separated list of e-mail addresses of those who need to be notified of system errors.
- **AWA_EMAILNOTIFICATIONS** – These three values will have the URL, username, and password for the e-mail notifications Web Service, which allows SORT to provide the community notification functions through the public Web sites. SORT is configured with the proper production system URL.
- **AWA_PORTALWRAPPER** – These three values will have the URL, username, and password for the Offender Relocation Tasks Web Service, which allows jurisdictions to create Offender Relocation Tasks on the SORNA Exchange Portal. SORT is configured with the proper production system URL.
- **REPORTINGSERVICELOCATION** – This setting is used to identify the host running SQL Reporting Services.
- **TESTORPRODUCTION** – This setting turns off some functions of the system that should not be used when the system is being tested.
- **NIEMOFFENDERURL_HTTP** – This sets whether the site hosting offenders is secure or unsecure. This is used in the National Information Exchange Model (NIEM) Web Service.

- **NIEMOFFENDERURL_URL** – This sets the domain and path to view the offender’s detailed information. This is used in the NIEM Web Service.
- **NIEMOFFENDERIMAGE_HTTP** and **NIEMOFFENDERIMAGE_URL** – These are similar to the offender URL listed previously except for the offender’s images. This is used in the NIEM Web Service.
- **PREVIEWHTTP** – This sets whether the site hosting the local jurisdiction’s preview site is secure or unsecure. The preview site is used by the local jurisdictions to view changes they have made to the look of their public Web site before they publish them.
- **PREVIEWURL** – This sets the domain used for the preview site.
- **PREVIEWURLHOSTCONTAINS** – This is the domain used for the preview site to allow the system to know whether the link is coming from production or preview.
- **PREVIEWPRODUCTIONURL** – This is the domain used for production so the system can redirect users to the correct place when previewing changes.
- **PRODUCTIONDOMAIN** – This is the domain that is appended to the jurisdiction’s Jurisdiction ID for the jurisdiction’s Host Header value. For example, if this key is set to “state.gov,” then the Host Header for a local jurisdiction added to SORT with the Jurisdiction ID “nypd” would be “nypd.state.gov.”
- **ENABLEOFFENDERCHANGEAPPROVAL** – This value turns the change-tracking function on and off. If this value is set to “true,” then the offender submittal and approval process is available in the application. If this value is set to “false,” then the system is in auto-approval mode and all changes to offender information will be written to the database.
- **NUMDAYSAFTERSCHEDULEVDATE** – This value sets the number of days past a scheduled verification date that the system should wait to consider the scheduled verification date as missed.
- **NUMDAYSBEFORESCHEDULEVDATE** – This value sets the number of days prior to a scheduled verification date that an offender is eligible to make a scheduled appearance.
- **JURISDICTIONNOTIFICATIONFROM** – This value determines what the “From:” e-mail address will be when community notification e-mails are sent. The Jurisdiction ID will be added to this value to create the “From:” e-mail address. For example, if the value is “.alerts@state.gov” and the Jurisdiction ID is “nypd,” then

the community notification e-mails will appear to be sent from "nypd.alerts@state.gov."

- **MAXIMAGE SIZE** – This value determines the maximum dimensions in pixels the images will be in SORT.
- **MAXTHUMBNA ILSIZE** – This value determines the maximum dimensions in pixels the thumbnail images will be in SORT.
- **IMAGEQUALITY** – This value determines the quality of the thumbnail images in SORT. The higher the quality, the larger the image file size will be.
- **MAXIMUMSEARCHRESULTS** – This value determines the maximum number of records that will be returned for an offender search.
- **RELOCATIONTASKIDENTIFIER** – This value sets the default jurisdiction for viewing Offender Relocations Tasks from the SORNA Exchange Portal in SORT. To find out your jurisdiction's identifier, log in to the SORNA Exchange Portal and access your jurisdiction's portal site. The URL will include your identifier, such as [https://portal.nsopr.gov/"IDEN TIFIER"/.../](https://portal.nsopr.gov/).

Connection Strings Section

There is one connection string defined in this section of the administrative Web site Web.config and Log4Net.config files and public Web site Web.config and Log4Net.config files that needs to be changed to point to your internal server, database, username, and password. The NSOPW_SORT database includes the WebSOR login, which has the necessary permissions to be used in the connection string. If you choose to use the WebSOR user, then the password parameter must match the password that was created for the WebSOR login in the previous steps. If you choose to create a new login and password to use in the connection string, make sure the login has "db_datareader," "db_datawriter," and "public" permissions for the NSOPW_SORT database and has "Execute" permissions on all of the stored procedures.

Mail Settings Section

Both the administrative Web site Web.config file and the public Web site Web.config file include a Mail Settings section. In this section, you should change the "network host" parameter to your network's mail server. Ensure that the Web server has permission to relay e-mail through your mail server.

Custom Errors Section

The Custom Errors setting controls how application errors are handled for the user. If this setting is "On," users will receive a custom error page when the application errors. If this setting is "Off," error messages will be displayed on your screen, which is helpful for debugging.

Console Application

SORT includes the Offender Verifications console application that assists with the organization of the offender verification appearance dates. The Offender Verifications application files are located in the OffenderVerifications folder included in the SORT Application zip file.

To install the Offender Verifications application, perform the following steps:

1. Copy the OffenderVerifications folder to the location on your server where you want the files to reside.
2. Navigate to the OffenderVerifications.exe.config file located in OffenderVerifications\bin folder.
3. Modify the following parameters in the OffenderVerifications.exe.config file:
 - Set the NUMDAYSAFTERSCHEDULEVDATE to the number of days past a scheduled verification date that the system should wait to consider the scheduled verification date as missed. This value should match the value for the same parameter in the administrative Web site Web.config file.
 - Set the NUMDAYSBEFORESCHEDULEVDATE to the number of days prior to a scheduled verification date that an offender is eligible to make a scheduled appearance. This value should match the value for the same parameter in the administrative Web site Web.config file.
 - Change the Connection String to point to your internal server, database, username, and password.
4. Configure Windows Task Scheduler to run the Offender Verifications application located at "OffenderVerifications\bin\OffenderVerifications.exe" once a day.

Running the Application the First Time

After IIS, SQL Server, Web.config files, and the console application file are configured appropriately, perform the following steps.

1. Review the Web.config file settings described in the previous sections, and set the appropriate values for the settings you wish to change.
2. Ensure that the following changes have been made before accessing the SORT application.
 - a. Ensure that the INSTALL key is set to "true" in the administrative Web site Web.config file.

- b. Set the PRODUCTIONDOMAIN key to the domain that will be used for the environment in which SORT is being installed. This is the domain that is appended to the jurisdiction's Jurisdiction ID for the jurisdiction's Host Header value. By setting this value during the configuration process, an initial state public Web site should be operational when the installation is complete and the appropriate Host Header is added to the SORT Public Web site settings in IIS. The state Host Header will be the ID that was created during the SQL Script process and the domain defined in this Web.config key. For example, if the ID is "SOR" and the PRODUCTIONDOMAIN key value is "Hawaii.gov," then the Host Header for the state public Web site would be "sor.hawaii.gov."
 - c. Set a random encryption value in the "KEY" key that is between six and ten characters long (the longer the key, the longer the application will take to provide the encrypted values). Once these are set and the application is used, these values cannot be changed, or all encrypted information in the database will be unusable.
 - d. Configure the Connection String in the administrative Web site and public Web site Web.config and Log4Net.config files and the OffenderVerifications.exe.config file to point to your database server, and use the WebSOR user with the password you set up. If you prefer to use a different user account, make sure it has the same settings as the WebSOR user created by the script.
 - e. The rest of the Web.config settings can be set after the initial run of SORT.
3. Open your browser and navigate to the URL of the administrative Web site. After a few seconds, you should receive a message that says, "Remove the install application setting from the Web.config before reloading the page." The application has now created a default state administrative user account.
4. Close the browser window and open the administrative Web site Web.config file. Find the INSTALL key line that says `<add key="Install" value="true"/>` and remove it or comment it out and save the Web.config file. This will prevent the application from continually creating the default state admin user account and not allowing access to the application.
5. Open your browser and navigate to the URL of the administrative Web site again. This time, you should receive the SORT login page. Log in with the following default state administrator account.

E-mail: admin@state.gov

Password: State@dmin1

6. You should now be able to administer the SORT application using the SORT User Manual.

NSOPW Web Service

The NSOPW Web Service will allow the database to be searchable by NSOPW. Set up the Web Service Web site in IIS similar to the other sites, so NSOPW.gov can access the Web Service. The files needed for the Web Service are located in the WebService folder in the SORT zip file.

IIS 6.0

For IIS 6.0, follow the steps outlined in the [Implementing SORT in IIS 6.0](#) section of this document. When specifying the home directory of the Web site, enter the location of the NSOPW folder. For example, if the full path to the .asmx file is "C:\Inetpub\Web Service\NSOPW\NSOPWService.asmx," then the home directory should be "C:\Inetpub\Web Service." When you have finished creating the Web Service site, create an application for the NSOPW folder by performing the following steps:

1. Right-click on the "NSOPW" folder, and select "Properties" from the menu.
2. On the Directory tab, click the "Create" button, in the Application settings section, and click the "OK" button.

IIS 7.0

For IIS 7.0, follow the steps outlined in the [Implementing SORT in IIS 7.0](#) section of this document. When specifying the home directory of the Web site, enter the location of the NSOPW folder. For example, if the full path to the .asmx file is "C:\Inetpub\Web Service\NSOPW\NSOPWService.asmx," then the home directory should be "C:\Inetpub\WebService." When you have finished creating the Web Service site, create an application for the "NSOPW" folder by, right-clicking on the "NSOPW" folder, and selecting "Convert to Application" from the menu.

Web Service Connection String

The last step in configuring the NSOPW Web Service is setting up the connection string in the Web.config file so the Web Service can access the database. Perform the following steps to properly configure the connection string:

1. Open the Web.config file located in the NSOPW folder on your server.
2. Locate the line that says
`<add key="hibernate.connection.connection_string" value="Server=YOUR`

```
DB SERVER;Initial Catalog=NSOPW_SORT;User  
ID=WebSOR;Password=PASSWORD" />.
```

3. Replace "YOUR DB SERVER" with your database server's name.
4. Replace "NSOPW_SORT" with your database name.
5. Replace "WebSOR" with your username.
6. Replace "PASSWORD" with your username's password.
7. Save the Web.config file.

Submit the Web Service URL

After the Web Service has been properly configured, send the URL of the Web Service to AWA-Request@iir.com so the Web Service can be tested with NSOPW.

Google Mapping and Geocoding Service

To utilize the Google Mapping and Geocoding Service that is built into SORT, the host and domain names of the Web site that will access the service must be added to service account. To do this, please send an e-mail to AWA-Request@iir.com with the host and domain names of all of the Web sites that will access the service.

